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A CASE OF TRANSFUSION.

By C. B. BRAMAN, M.D., of Brighton, late Assistant Surgeon U.S.A.

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J. S., æt. 30, Co. D, 12th U. S. Infantry, stationed in Petersburgh, Va., had served through the war in the Confederate Army; was by profession a circus rider. This man was remarkably athletic, and excelled his comrades in every manly exercise. November 5th, three weeks after enlistment, was engaged in turning somersaults over a bar. Shortly afterwards was attempting to hurl a heavy weight over his head backwards, when he felt "something give way," and immediately vomited a quantity of blood. He was supported to the hospital, a distance of three hundred yards, the blood flowing from his mouth as he went. I saw him half an hour afterwards, and found him anxious and gasping for breath, making labored efforts to free his throat of the bloody sputa which seemed to threaten asphyxia. The pulse was rapid and feeble. The ordinary styptics were administered, with stimulants. He seemed easier for an hour, when a violent fit of coughing ensued, followed by a copious hæmorrhage from the mouth accompanied by the contents of the stomach. The patient began to grow very feeble; pulse hardly perceptible. Elixir vitriol gtt. x. in aquæ q. s., p. r. n. As stimulants seemed to increase the difficulty, they were discontinued *per orem*. Laudanum, with brandy and water, was injected into the rectum. This not being sufficient to control the coughing, the breast was scarified and dry morphine rubbed in. Relief was, however, only temporary. Renewed hæmatemesis continued until 4, P.M., when the patient was deemed moribund, and a clergyman, sent for at his request, administered the last offices.

I was surprised to find him living, the following morning. The treatment *per anum* had been actively persevered in through the night. The nurse informed me that he had emptied a common water bucket of blood and fluid, which included that vomited the day previous. An officer asked if nothing more could be done. I mentioned *transfusion*, but frankly told him that there was no chance of

saving a man who had lost so much of the vital fluid. He insisted upon my performing the operation, and offered a man for my service. A cup was placed in a basin of warm water. After bandaging the arms, I dissected out the median basilic vein in the one, and tapped it in the other, and, with a small penis syringe, I injected nearly f ʒ iijss. of blood, the assistant firmly compressing the vein after each injection. On account of the fluid clotting, I was obliged to desist, and secured a compress over the wounded vein. An enema of brandy, quinine and laudanum followed, and I was at once surprised and delighted to observe a remarkable change in my patient for the better. The pulse began to be faintly perceptible, the countenance flushed, and animal heat returned slowly to the extremities. With fear and trembling I watched the result. Any tendency to cough was at once checked by opiates, which I now ventured occasionally to give through the mouth. The scarification, with application of morphine, was renewed, and nourishment administered as before stated. To make a long story short, on the fourth day my patient was pronounced out of danger. In one week from the time he entered the hospital, he was able to sleep in a bed-chair. He continued to improve until he was discharged, three weeks afterwards, by order of the Medical Director.

The diagnosis made in this case was *aneurism of the thoracic aorta.* At the time of his discharge, he was unable to sleep otherwise than in a sitting posture. Cough was persistent and annoying. Constant "gnawing" pain was experienced in the region of the sternum. A distinct fluctuating tumor was observed near the juncture of the third right rib with the sternum, while the *fremissement cataire* was plainly perceptible. The patient was said to have taken up his residence in Philadelphia. I have not heard from him since.

The exact amount of blood lost from first to last could not be easily measured. It seemed as if there was little more to lose. For the first three days I administered no less than 72 grains of opium daily in equivalent, through the mouth and rectum, besides that absorbed by the skin in scarification. The results of its use were satisfactory, but of slight duration. The amount of blood transfused was comparatively small, but sufficed to turn the scale in our favor.

Such cases as the above afford an instructive lesson, which we should all do well to remember.

EFFECT OF ERGOT OF RYE ON THE PREGNANT FEMALE.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—The remarks of Dr. Charles H. Jones and Prof. Huston, which you published in the last No. of your JOURNAL (Jan. 16th), I think should be noticed by some one, as they are calculated to lessen the confidence of the profession in the value of ergot of rye in obstetrical practice.

Dr. Jones says his "convictions are" that it often "destroys the life of the child," and that a "great number of stillborn children can be traced directly to its use."

Prof. Huston says:—"My own experience with the article convinces me that it is a most dangerous and destructive drug. The children were stillborn in a proportion shocking to my feelings."

Ergot of rye is an established article of the Materia Medica, is ranked among the potent drugs in daily use by the medical profession, and is possessed of inestimable properties, as all experience will testify. Let us look at the "convictions" of Dr. Jones and "the reasons of his faith" and "the evidence on which it rests."

"Labor is a physiological process, and as the laws of nature are never without purpose, is it not reasonable to conclude," &c. See article.

Nature's attempt to unite an unadjusted fracture is equally a physiological process, but does she accomplish it under all circumstances? The peristaltic action of the intestines is a physiological process, but is it always effectual? Must we neglect to adjust the fracture or to give cathartics for fear of defeating nature's physiological processes; or because all fractures have not been treated as they should have been, or because cathartics have not always been given with due discrimination? The cases are parallel.

Prof. Huston's feelings must be daily shocked at the undiscriminating use made of powerful drugs by the profession at large, we should judge, if he is collecting statistics as regards the use of opium, &c.; but does he advise their discontinuance in general practice?

Careless and injudicious management often causes a steam-boiler to burst, scattering desolation around. Must we take to the old coach because boilers can be burst, and because nature's laws are never without a purpose?

The absurdity of this attack on ergot appears the more palpable when we remember we have perfect control over its effects in or by the use of chloroform. No two persons have the same susceptibility to the influence of ergot, any more than they have to the effects of alcohol or opium; and if a dose of ergot produces excessive or unremitting contractions of the uterus, a brief but rapid inhalation of chloroform or its dilutions will immediately arrest it, giving the accoucheur perfect control of the labor.

It is a common practice with me to give ergot in tardy and difficult labors, and also before administering ether or chloroform in labor, as it tends to prevent any diminution of the frequency or expulsive force of uterine action under the moderate use of these anæsthetics; and it is also a common practice with me to restrain any unusual action of ergot with chloroform. With these "dangerous" and "destructive" medicines at hand, the accoucheur can curb or give rein to uterine action, with incalculable relief to the mother, and

without increasing the tables of mortality, the statistics of Philadelphia to the contrary notwithstanding.

Lawrence, January, 1867. G. W. GARLAND, M.D.

SPERMATORRHŒA—A NEW METHOD OF TREATMENT.

By CHALES BLISS, M.D., of Syracuse, N. Y.

[Communicated for the Boston Medical and Surgical Journal.]

IN calling the attention of the profession to the method of treating spermatorrhœa as illustrated in the following cases, I would say that it needs a more extended series of observations than it has yet received to determine its true value as a curative agent in this obstinate and frequently intractable disease.

CASE I.—J. M., æt. 18, clerk, consulted me April 25th with regard to nocturnal emissions, which, he said, occurred as often as three or four times a week; complained of loss of memory and inability to fix his mind intently on any subject; said he was losing flesh and strength, and felt great disinclination to any exertion, either bodily or mental. He had contracted the habit of masturbation at a boarding school, several years since, but had relinquished it some time previous to consulting me. The patient was pale and anæmic, with soft and flabby muscles, furred tongue, offensive breath, and bowels habitually constipated. Troubled considerably with palpitation, feelings of dizziness, &c. On examination, there was no tenderness on external pressure along the course of the urethra nor over the prostate. The prepuce was long, extending about three fourths of an inch beyond the end of the penis, and was retracted with difficulty; the mucous surface of it, as well as the sulcus behind the corona glandis, was somewhat inflamed and the seat of an irritating discharge. On passing a sound into the urethra, no soreness was found until reaching the prostate, which was a little tender. I removed about an inch of the prepuce, stitching the skin and mucous membrane together in the usual manner; water dressing. Ordered the following:—℞. Ferri et potass. tart., ʒ i.; quiniæ sulph., gr. xv.; rhei pulv. ℈ iss. M. Ft. mass. et div. in pil. No. xxx. S. Two before each meal. Also:—℞. Potass. bromid., ʒ ss.; potass. iodid., ʒ i.; aq. camph. f ʒ ij.; aq. puræ, ʒ iv. M. S. Two teaspoonfuls at bedtime.

April 30th.—Prepuce healed, except at one point, to which nitrate of silver was applied; stitches removed. No emission since operation. Directed to keep the parts thoroughly cleansed, and continue medicine as before.

May 7th.—For two past nights has had emissions. Prepuce entirely healed; no discharge from it or the sulcus behind the glans; appetite better; general health improving. Continue medicines as before.

27th.—Has emissions about as frequently as before he began treat-

ment; appetite good; bowels regular, and sleeps well unless troubled with emissions. Passed a metallic bougie, size of No. 8 catheter, having previously reduced its temperature to about 38°. Discontinuing all medicines, the bougie was passed twice daily, allowing it to remain from five to ten minutes at a time until—

June 20th.—Having had no emission since last date, he discontinued treatment, contrary to my advice.

July 1st.—Had another emission last night. The treatment with cold bougies—No. 10 being now used—was recommenced, and continued as before until about the middle of August.

Nov. 4th.—Has had no nocturnal emission since July 1st; good appetite; sleeps well; no palpitation, and feels in perfect health every way.

I have been, perhaps, unnecessarily minute in giving the details of this case, but it strikingly illustrates the effect of the local treatment, and also the fact that to be efficacious it must be continued a considerable length of time. In most cases, the patient can introduce the bougie himself after being shown how a few times.

Case II.—A. J., æt. 22, insurance agent, consulted me Sept. 22d, 1866, with regard to seminal emissions. Became addicted to masturbation when about 13, and continued the habit for several years. Has an emission nearly every night, and sometimes twice in a night; being naturally of a strong and robust constitution, this excessive drain has not had so disastrous effects on his general health as might be anticipated, although he complains of a constant feeling of lassitude and disinclination for exertion. Has not masturbated for about three years. Countenance pale; skin sallow; bowels sluggish, moving, ordinarily, once in two or three days. He exhales a peculiar seminal odor. Slight tenderness along the whole course of the urethra, on external pressure; a very slight mucous discharge, resembling that of gleet, though he assures me that he never has had gonorrhœa. Considerable pain on passing a sound into the urethra, which was greatly augmented on reaching the prostate. Ordered the following, to be repeated two or three times a week, *pro re natâ*. ℞. Hydrarg. chlorid. mitis, sodæ bicarb., āā gr. vi.; rhei pulv., gr. viij. M. S. Take at bedtime. Passed *cold* bougie, No. 6 size, twice daily, for several days, leaving it in for about ten minutes at a time. At first, pain was very severe on introducing it, continuing for an hour or more after it was withdrawn; but this gradually diminished, until, at the end of about two weeks, there was no unpleasant sensation connected with it whatever. The patient then continued the application of it himself for about three months; the size being gradually increased to No. 10. He had no emissions after the first application, and a year after had had no return of them, his general health in the mean time having vastly improved.

Case III.—E. L., æt. 20, clerk, consulted me Dec. 19th, 1866. Had contracted the habit of masturbation when a boy, at school.

Had an emission nearly every night, sometimes, though not always, accompanied with lascivious dreams. Pale, doughy-looking countenance; troubled with dizziness and palpitation; slight pain on passing sound over prostate; no tenderness there or elsewhere along the course of the urethra on external pressure. Cold bougie, No. 10, as in the preceding cases. This was continued about six weeks, he having but one emission after the commencement of the treatment. In June following, had had no return of the disease.

The beneficial effect of this method of treatment is due, I think, to the local tonic and sedative action of cold in allaying the irritability and overcoming the hyperæsthesia, on which the continuance of the disease in most cases principally depends.* I took occasion to verify the diagnosis in each of the preceding cases by microscopic examination. The very satisfactory results which have thus far attended this method of treatment seem to render it worthy of a more extended trial, as it may be applicable to many, if not most of the cases where cauterization is ordinarily resorted to. Should such prove to be the case, its advantages are too obvious to require comment. A common steel sound will generally be found most convenient, its temperature being reduced to the proper point by immersion in ice-water for a few minutes before using it.

December 27th, 1867.

IS INTERMITTENT FEVER CONTAGIOUS?

[Communicated for the Boston Medical and Surgical Journal.]

Is intermittent fever contagious? I am inclined to think it is, for the following reason. In September, 1865, while visiting a friend at Milton, Mass., I was seized with ague—a regular "naturalizing shake." The lady of the house came frequently to my room, kindly administering to my wants; I was also quite an object of curiosity to her, as it was the first "ague fit" she had ever witnessed. On the fifth day from the time of exposure, she complained of a chilly sensation, followed by quite a fever, which lasted for an hour or more. I was convinced, judging not only from the general symptoms, but from the appearance of the tongue, that she had the "*dumb*" ague, and so informed her; at this she was indignant, and evidently thought I was crazy. "Why, doctor! we *never* have ague here; I never heard of but two cases in this town, and they were imported from California." Knowing it would be useless to argue the point with her, I let the subject rest. Each day brought a return of the chill and fever; when, on the morning of the *ninth* day, she had a "shake" that would have been a credit to an *Illinoisian*, and sufficient to convince her that I was correct in my diagnosis.

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* I am indebted to my friend, Dr. Crane, of Pittsfield, Mass., for suggesting the idea of its application to this particular disease.

I am aware that this isolated case proves nothing, and only report it in the hope that it will call forth an expression of opinion from those who are more competent to decide, than

Hillsboro', Illinois. AMOS SAWYER.

CONTRIBUTIONS TO DERMATOLOGY.

[Continued from page 520.]

LUPUS.

WHAT is lupus? In looking over the works of the ancient writers, it is interesting to observe the figurative language they often employ to illustrate their ideas of the forms or the peculiar characteristics of the diseases that attack the human system. In the present instance the symbol chosen is one of the most ferocious wild beasts that roam in field or forest, and whose very name is suggestive of destruction; and destruction being the salient feature of lupus, a more appropriate similitude could not be selected.

The disease is confined to no age or sex, or class of subjects. It presents three principal varieties—namely, lupus erythematodes, lupus non-exedens, and lupus exedens. Other varieties are mentioned by different authors, as lupus vulgaris, lupus vorax, and lupus hypertrophica, the latter originally described by Biett. All these forms are but different degrees or stages of the same disease.

The general health usually remains unimpaired, even where the local affection continues for ten, twenty or thirty years. There is a tissue-change which supervenes upon the local inflammation, and this change, together with loss of substance unlike what takes place in any other cutaneous disease, constitutes a distinguishing attribute of the complaint.

In the first variety which we propose to consider, there is an erythematous condition of the skin, followed by loss of substance or atrophy in the affected part, without the formation of tubercles or ulceration.

In the second variety there is a development of tubercles, followed by destruction of tissue *without* ulceration.

In the third, there is the formation of tubercles and subsequent loss or destruction of the skin, and sometimes of the deeper tissues also, *by* ulceration. Thus we have before us the distinctive features of the several forms of lupus. In each there is a devastating agency at work, although there is a diversity in the mode of operation. The disease is never contagious, and rarely traceable to hereditary predisposition. The most frequent locality for its development is the face, especially the nose. No constitutional symptoms are present, and rarely any pain. It sometimes happens that while the eruption occupies the face, nose or head, the fingers or back of the

hands, or some other distant part, may present a similar morbid affection. It commonly appears in well-marked round or oval discs of deep-red color. When it breaks out on the ears, it generally commences on the posterior aspect, near the junction of the lobes with the lower point of the cartilage. Here it remains partially concealed as a small red patch, not unlike a mosquito-bite, and attracts little or no attention, perhaps, for several months, by which time it will have crept upward along the posterior surface of the whole ear, which becomes thickened and preternaturally red; and occasionally the patient experiences a slight sensation of burning and pruritus, and at a little latter period cannot allow that side of the head to rest on the pillow, or the hat or bonnet to be pressed against it, on account of the discomfort arising from increased heat. Occasionally, erythematous patches are developed nearly simultaneously on the nose, ears, cheeks, forehead and upper lip, and on the mucous lining of the mouth and nose. In a few weeks, or perhaps months, a thin, white, delicate scale forms on the diseased surface, as in psoriasis. It is very adherent, although it desquamates every now and then in the form of a horny layer.

When the morbid action has continued for a long period, the diseased integument is atrophied, puckered and depressed, and is much thinner than natural on account of interstitial absorption, and not by open ulceration. If the fingers are the parts involved, the redness and tumefaction which have so long existed subside, and the skin is reduced to a white, hard and horny covering, and seems drawn tightly around the bones, like a smooth clasp. And so with the back of the hand of a lady whom we once saw, and on whose left hand the complaint had lingered from the age of 5 to 35 years. The whole surface was perfectly bloodless, and white and polished as parian marble. The disorganized skin was sealed down firmly to the carpal bones, and the ring and little finger were bent immovably upon the palm; the parts thus disfigured seemed at first view to have suffered from the effects of a severe scald or burn. This patient had been afflicted also, for some eight or ten years, with lupus non-exedens on the nose.

When the disease attacks the cheeks or nose, the inflammation, induration and hypertrophy of the affected part produce great deformity. There is a sort of knobby or lobulated appearance occasioned by the development of tubercles, which sometimes increase in numbers with great rapidity and coalesce. As the morbid processes begin to decline and the disease advances towards a cure, the redness and swelling gradually subside, and the skin assumes a smooth, shining appearance; there is loss of substance, and the portion of integument which was the seat of the lupoid action sinks below the plane of the adjacent surface. And if the nose is the unfortunate organ on which the malady plants itself, it looks sharpened or notch-

ed, as if the soft parts had been pinched or irregularly pared off, the bones and cartilages become prominent, and a remarkable cicatrix and deformity remain, which no surgical operation can repair.

In some cases there is, for a very long period, repeated exfoliation of thin, white, dry, laminated scales from the cicatrized surface after every other morbid process has ceased. (This is the scrofulide érythémateuse of Hardy.)

Lupus non-exedens.—This generally commences at an early period of life, and is usually represented by the development of a few distinct tubercles, varying in size from a pin's head to that of a pea; they are slightly flattened on their summits, somewhat elastic and boggy to the touch, and if pressed or broken with a probe, or otherwise disturbed, they readily bleed. They often remain in a dormant state for months or even years without producing any inconvenience to the patient, except as regards looks; and show no disposition to increase until, perhaps, their activity is awakened by some unappreciable cause or circumstance, when they suddenly enlarge at the circumference and multiply in number, and thus by their aggregation and fusion they form a well-defined patch of a pale, dull-red or mottled color of various extent, and circular, oval or tortuous in outline. At length the patch is covered with scales or crusts—somewhat like those seen in eczema. These are adherent in their centre to the summit of the tubercles or nodules, while their edges are free and curled up. Cuticular desquamation, however, takes place, and is renewed at different intervals.

The disease seems to have a preference to some portion of the face, and the nose is by far its most frequent habitat. It sometimes attacks the back and extremities, especially the lower. Sometimes the morbid action commences on the upper lip, which soon becomes excessively tumefied, and gives rise to great disfigurement. The lower lip is very seldom the seat of the disease. The central portion of the patch often heals, and the cicatrix is decidedly lower than the peripheral portion, which is studded over with a ringlet of tubercles. These coalesce, and form, as it were, a separating wall between the morbid and healthy skin. The area of the diseased action enlarges very slowly, and if seated on the integument covering the ossa nasi, the process of expansion, which usually extends in nearly equal ratio in all directions, encroaches on the lower eyelid. Eversion takes place from the contraction of the integument, and the mucous surface of the conjunctiva is exposed to the attrition of the air; and there is a constant flow of secretion, greatly to the annoyance of the patient. Laterally, the complaint advances far down upon the cheeks; meanwhile the process of healing is going on in the central part, which clears away and cicatrizes, but without true ulceration. There is loss of substance by absorption, and the thin skin is slightly puckered and very adherent to the bones. Its sensibility is much enfeebled or totally lost, and it never regains its

original appearance or resiliency. When the devastations are completed, the individual often presents a most unique and hideous deformity. Nearly the whole of the cheeks, lips and chin is sooner or later covered with a succession of fresh tubercles, which run together, and the patient looks as if his face was covered with a mask. This is the lupus with hypertrophy of Biett. It is often developed in connection with the erythematous variety, or with a lupoid ulceration of the mucous membrane within the buccal cavity or the nasal fossæ. In some instances, the disease commences in the latter region and produces at first a simple redness on the external integument, with slight thickening of the alæ, while it eats its way through the cartilaginous septum and higher up in the direction of the turbinated bones. Such is the strange and fitful course pursued by this complaint in very many cases.

Lupus exedens.—This form of lupus is more frequently met with than any other. It commences by the development of one or more tubercular masses, which are characterized by greater hardness and density in their structure, and less transparency than are present in those of lupus non-exedens. Their tendency to ulceration becomes apparent at an early day, and progresses with marked activity in many instances, while in other cases its march is very slow. When the former tendency prevails and the complaint attacks the nose, this organ is sometimes entirely destroyed in four or five weeks. The soft parts, the cartilaginous structure, and sometimes the osseous, are swept away by this peculiar process of destruction in spite of all efforts to arrest its voracity.

The disease may attack other portions of the surface at the same that it affects the nasal organ—as the entire scalp or face, the back of the neck, between the shoulders, on the hands, fingers, toes, &c., and may proceed to the destruction of all the soft tissues that lie within its path; and in some instances not sparing even the bones.

Ordinarily, the disease, commencing as a small, hard tubercle, remains nearly quiescent for some considerable time, and then passes into a suppurative stage and is soon covered with a thin greenish-brown scab, and remains, perhaps, circumscribed to a single spot. Other tubercles appear in the immediate vicinity at various periods, and undergo the same changes. The patient picks off the soft and yielding crusts, beneath which a light yellowish fluid may be concealed, and when this is wiped away an excavated ulcer, more or less deep, may be exposed to view; or, instead of any secretion, a red pulpy surface may be left, which bleeds on the slightest touch. This ulcer becomes concealed by the formation of another scab larger than the first, and formed by the drying up of the semi-purulent or fœtid, ichorous matter poured out upon the diseased surface.

The surface of the ulcer of lupus exedens is ragged, the edges thick and red, covered with a white exudation of lymph and with small, unhealthy granulations. There is a frequent attempt at cica-

trization, which may and does take place to some extent; but the sore, once established, does not readily close. It may give promise of being healed soon, when all at once the ulcerative process seems to have acquired a fresh impulse.

However severe and extensive the ravages of lupus exedens may be, it is seldom that any pain is experienced during the whole course of the malady, and in this particular, as well as in many others, it resembles constitutional syphilis. Sometimes there is itching in the part, especially towards night, and after certain articles of food have been taken; and in sudden changes of weather the patient experiences a temporary uneasiness, but scarcely amounting to absolute pain.

When the ulcer of this variety of lupus heals, the resulting cicatrix is of a pearly white, with streaks of a faint purplish tint, and corrugated bands running over it, as mentioned in connection with the previous disease. It is no uncommon event for the complaint to break out afresh at some future day at some point within or near the boundaries of this cicatrix, whatever line of local or constitutional treatment may have been adopted.

The consequences of lupus exedens vary with the part on which it is situated and the period at which it is subdued by treatment. If seated on the nose and cured early, a slightly notched scar remains, and the tip of the organ is pointed and irregular. If on the cheek or ear, and has been cured before it spread extensively, the remaining scar does not occasion much deformity. These unimportant blemishes, however, are rare compared with the more frequent and frightful deformities which the malady generally produces, especially if of a syphilitic origin. In such cases it owes its terrible severity and consequences to the superaddition of a specific poison that pervades the constitution. It may attack the forehead or nose, and appear simultaneously on the extremities, the front of the neck, the buttocks, or elsewhere on the trunk of the body, in the guise of what are called serpiginous ulcerations. The skin suffers first and generally the most; the cartilages come next, and finally the osseous framework of the nose and roof of the mouth are swept away.

Lupus is little liable to be confounded with any other disease that invades the skin. The tubercles, which are its earliest representatives, are of a livid, dull red color, pursue an indolent course and are usually confined to one spot or district, as the nose, lips, cheeks, ears, &c. Sometimes the complaint commences as a single tubercle. At a variable period the tubercles pass into a state of ulceration. This ulcerative process soon spreads beyond the limits of the original tubercles. Slight, scaly crusts are formed. These are quite adherent, but break down easily from trifling pressure. At length attempts are made at repair in the shape of unhealthy-looking cicatrices. The complaint is unaccompanied by any constitutional symptoms of the slightest importance. These are pathognomonic features.

Pathology.—In regard to the new-formation of connective tissue which constitutes the essence of the disease, Wedl states as the results of his investigations that it is at first very limited in extent, and accompanied with injection of the vessels and tumefaction. It gradually extends, and produces a consecutive atrophy of the organs in which it spreads. In the *cutis* the hair falls out, and the sebaceous glands and *papillæ* shrink; in a word the cicatriform, smooth aspect of the skin, above noticed, is produced. In this atrophied condition the latter is ultimately perforated by the new growths. A cicatriform contraction, moreover, may remain at one spot, whilst the perforation of the skin takes place at another. The new-formation of connective tissue may, also, extend into the adipose and muscular tissues, or so far even, as to affect the bones themselves, and to interfere with the nutrition of the elementary organs, which become as it were supplanted by the new-formation, but not dissolved. The new connective tissue may suffer involution in many places, where the conditions for its further development are wanting; but it is not subject to any genuine or spontaneous, retrograde metamorphosis, accompanied by a softening of the new-formed substance. The *pus* which is so commonly formed in *lupus*, should by no means be regarded, as it has been, more especially by the older writers, as a product of the breaking up of the newly organized substance, or of the normal elements of the tissue; a view, which, according to opinions at present received, must be wholly rejected, inasmuch as the pus is itself a new formation out of a *blastema*, which, in the present case, as in many other instances, is associated with the new-formation of connective tissue.

Causes.—Syphilis is one of the most frequent causes of this complaint, although many individuals who are afflicted with lupus, furnish no evidence in their history that their disease is in any way or degree derived from the venereal taint. Scrofula is named by various authors as the parent of lupus; and yet a scrofulous taint in the system is a myth in the opinion of many able writers. If we admit its agency in the production of lupus we must do so on a purely hypothetical basis.

Lupus is much more common in women than in men; and this fact, in our judgment, seems to take away all foundation for the theory in regard to the ideal relationship between lupus and scrofula.

The influence of sex and age is very marked as among the predisposing causes of the several varieties of lupus. Of 170 cases collected and reported by Mr. Naylor,* Assistant Surgeon to the Hospital for Diseases of the Skin in London, during the years 1861, 1862, and 1863, 131 were females and 39 males. These figures represent lupus in the aggregate only, a much greater difference being noted in some of its varieties. Thus in lupus exedens the ratio is

* Diseases of the Skin, by George Naylor, F. R. C. S., London: 1866; p. 165,

5 to 1 between the two sexes, and higher yet in the two other varieties. Lupus exedens as a rule is developed primarily between the ages of 10 and 30, becoming more rare after the latter period, and seldom commencing before the seventh year.

Lupus arising from syphilis takes a wide range in its period of development, beginning as early as the fourth or fifth month and as late as the seventieth year and upwards. Lupus is not specially influenced by occupation, or locality. We have known quite a number of cases following the receipt of some slight injury to the part as the immediate cause of the complaint; as a blow, a scratch, a spark of hot cinders, &c., impinging on the site where the tubercle appeared soon after the accident.

There is another fact connected with the etiology of the disease which is difficult of solution, and that is, that it is seldom seen in the upper classes of society. Is the disparity due to a better quality of food, better air, greater cleanliness, or is it not influenced by these circumstances? The affirmative would seem to be the true answer.

The prognosis is not always very satisfactory. In recent cases, or those of quite limited extent, the prospect of permanent recovery is encouraging; but in cases where the morbid habit has existed for years and spread over a large field, great assiduity, care and skill are requisite to accomplish a cure of the existing evil; and when this is effected the probabilities are pretty nearly balanced as to whether or not the malady will reappear at some future day. This contingency, however, affords no reason for the neglect or omission of any remedial measures which in the judgment of the medical adviser the case demands.

Treatment.—There is no specific course to be pursued either as regards constitutional or local remedies. We must be governed by general principles of medical science. The health of the patient rarely ever suffers from any of the varieties of lupus, except it be from constitutional syphilis. If the latter evil is engrafted into the system the lupoid development is to be considered in connection with the constitutional malady and "part and parcel of it;" and all internal remedies must be selected from among those which are in best repute for secondary or tertiary syphilis, as the case may be. The patient should be under the best hygienic influences at all times.

Arsenical preparations have often been administered for the cure of lupus, but no well-authenticated reports in favor of them have been recorded in medical or surgical works, and it is but just to remark of them that they possess no claim to confidence in the disease under consideration. Mr. Wilson is inclined to recommend Donovan's solution in doses of ten or fifteen drops three times a day at meal time. Few patients can tolerate this amount of the solution for any length of time. We so judge from frequent reports from them, and we have ceased to prescribe it in any quantity. In its stead we prefer very small doses of the bichloride of mercury—say

the tenth of a grain morning and evening. It should be taken with meals, in the form of pill, or solution with the compound tincture of cinchona, or compound tincture of cardamom. The cod liver oil is just now a popular article in lupus. The daily quantity recommended by different surgeons ranges from half an ounce to one or two pints!

Nitric acid, nitro-muriatic acid, the various chalybeates, the iodide of potassium, the chloride and carbonate of ammonia, and an unlimited number of mineral waters—all have their advocates. Whatever course of constitutional treatment, in the judgment of an intelligent physician, may be indicated with a view to restore or preserve the integrity of the several vital organs and their functions, will be the proper one. And it will be labor lost if he looks here or there after specifics.

The local treatment must be our main reliance; and with this there will be need of long and patient perseverance in a majority of cases.

In erythemetous lupus, if the efflorescence is quite limited, one of the best local applications to commence with is a compound tincture of iodine of the following strength:—℞. Potassii iodidi, ʒ ijss.; iodinii, ϑ ij.; Aquæ fontanæ, ʒ j. M. A portion of this is to be applied twice a day for two or three days by means of a camel hair pencil. By this procedure the cuticle will be completely detached, and when this takes place the raw surface is to be covered with lint saturated with liquor plumbi diluted with an equal quantity of water. If the diseased surface is very extensive it may not be advisable to remove the cuticle from the entire patch at one time. The nitric acid very much diluted may be substituted for the lead wash if no benefit results from the use of the latter. If there is severe pain or smarting at any time, a lotion containing prussic acid can be employed with advantage in connection with a solution of the borate of soda. Generally speaking there is more discomfort experienced by the patient towards evening or a little later in the day than at any other time, from the smarting and burning. At such times the subjoined formula for a lotion should be ordered: ℞. Sodæ sub-boratis, ʒ ij.; acidi hydrocyanici diluti, ʒ ij. M. *Lotion.* Rags saturated with this may be applied to the lupoid surface.

The benzoated oxide of zinc ointment, with three grains of sulphate of morphia to each ounce, is likewise a suitable ingredient with which to dress the parts.

If the scales are very thick they can usually be detached readily by means of a strong solution of potassa fusa, or the carbonate of soda, and afterwards the raw surface is to be dressed with the lead water, or either of the other agents above mentioned. By these means the disease will often abate in severity. Other local measures are worthy of a trial also: such as the iodide of sulphur ointment, 15 grains to the ounce of rose ointment; the iodide of mercury ointment, one scruple to the ounce, to be applied every day or every

other day; or the iodide of lead ointment, one drachm to the ounce. This last may be applied constantly.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 30, 1868.

VALEDICTORY.

THE connection of the present Editors of this JOURNAL ceases with the volume now closing. The pressure of other duties has compelled them to give up what has been to them in a very large degree a labor of love. No one, in this country at least, expects that such editorial duties will be pecuniarily remunerative at all in proportion to the work which they imply; but they have been stimulated by the *esprit du corps* which has so fully animated their predecessors, to do their part, to the best of their ability, to keep the standard of the medical profession among us at the highest level.

To our medical brethren we would express our indebtedness for the aid which has sustained this JOURNAL through the trying times of the past seven years, and enabled its publishers to continue unbroken the series of forty years, when many other journals have dropped out of existence. This is very largely due, we are aware, to the kindness of our friends, whose contributions to our pages have given them their chief value. We hope that their interest will continue unabated, feeling assured that our successor will deserve their favors quite as much as ourselves. That gentleman needs no encomium from us; our readers are already familiar, through his contributions to our pages, with his intellectual ability and the thorough devotedness with which he pursues his professional calling. Our advertising pages this week will inform them of the changes to be made in the style and arrangement of the JOURNAL, which will, we are satisfied, commend it more than ever to their kind consideration. We retire with the hope that the BOSTON MEDICAL AND SURGICAL JOURNAL may always find gentlemen disinterested enough to undertake its editorial duties from a desire to sustain in New England an honorable, intelligent representative of the best phase of the medical profession.

MASSACHUSETTS COLLEGE OF PHARMACY.

FORMERLY, the physician was his own apothecary—doing, himself, the compounding and dispensing of the medicines he prescribed. Now, all this is changed, so far as this country is concerned. The doctor gives the written formula to his patient, and the latter supplies himself at the druggist's with the neatly put up box or phial containing the medicines—more or less pure or adulterated—which have been ordered. Even the country practitioner, who carries his pharmaceutic preparations in his sulky, obtains them ready-made in the form of tincture, pill, or powder, from the distant cityor town. Pharmacy has become an art by itself, and is to a great extent a mystery to many a successful prescriber. Chemistry, which took its origin in pharmacy, is, together with botany,

now called upon to supply the art with material for future progress. We foretell the coming of the time when the therapeutic investigator will rely, chiefly, as he already does to some extent, on the "pharmaceutist," for suitable combinations and formulæ of the agents to be experimented with.

Apothecaries have begun, therefore, to demand scientific instruction, and are elevating their calling into something more than a mere trade. The Massachusetts College of Pharmacy have instituted a course of lectures, and intend to issue diplomas to such candidates as may, by passing a proper examination, show themselves competent apothecaries, or, rather, "pharmacists." We have sought, and been favored with a perusal of the address delivered by S. M. Colcord, Esq., at the opening of this season's course of instruction, and have found it an able, elaborate, and instructive paper. We commend to the notice of our readers its closing paragraph:—

"We say, therefore, that the wholesale druggists, the apothecaries and their clerks, ought directly to sustain the Massachusetts College in its efforts to make this school a success; and that physicians, all lovers of social science, and the public, should, indirectly if not directly, aid in sustaining this institution as a public benefit."

We find in the *Chemical News*, a lecture "On the Chemistry of the Primeval Earth," delivered May 31, 1867, by T. Sterry Hunt, M.A., F.R.S. We offer an abstract of it.

As preliminary to the subject of the discourse, Mr. Hunt states that the spectroscope has shown the presence, in the sun—and in the suns of other systems—of the same chemical elements which exist in our own planet. The first Herschel conceived the nebulæ, which he observed in the heavens, to be the uncondensed matter from which worlds are formed. But, more powerful telescopes than his subsequently resolved some of these nebulæ into groups of stars, and thus doubt was thrown over Herschel's theory. That doubt has now been removed by the spectroscope, which has shown the existence of true nebulæ, or masses of luminous gaseous matter. These constitute one phase in the condensation of primeval matter, while a second phase is that of self-luminous suns, and a third is represented by bodies which, like our earth, shine only by reflected light. The nebulous matter is conceived to be so intensely heated as to be in the state of true gas or vapor, and for this reason feebly luminous when compared with the sun.

Calculations based on the amount of light and heat radiated from the sun show that the temperature which reigns at its surface is so great we can hardly form an adequate idea of it. Of the chemical relations of such intensely heated matter modern chemistry has made known to us some curious facts, which help to throw light on the constitution and luminosity of the sun. Heat, under ordinary conditions, is favorable to chemical combination, but a higher temperature reverses all affinities. Thus, the so-called noble metals, gold, silver, mercury, &c., unite with oxygen and other elements; but these compounds are decomposed by heat, and the pure metals are regenerated. A similar reaction was many years since shown by Mr. Grove, with regard to water, whose elements—oxygen and hydrogen—when mingled and kindled by flame, or by the electric spark, unite to form water, which, however, at a much higher temperature, is again resolved into its component gases. Hence, if we had these two gases existing in admixture at a very high temperature, cold would actually effect their combination precisely as heat would do if the mixed gases were at the ordinary temperature, and literally it would be found that "frost performs the effect of fire." The recent researches

of Henry Ste.-Clair Deville and others go far to show that this breaking up of compounds, or dissociation of elements by intense heat, is a principle of universal application; so that we may suppose that all the elements, which make up the sun or our planet, would, when so intensely heated as to be in that gaseous condition which all matter is capable of assuming, be uncombined—that is to say, would exist together in the condition of what we call chemical elements, whose further dissociation in stellar or nebular masses may even give us evidence of matter still more elemental than that revealed by the experiments of the laboratory, where we can only conjecture the compound nature of many of the so-called elementary substances. * * * * *

It matters but little whether we imagine the different planets to have been successively detached as rings during the rotation of the primal mass, as is generally conceived, or whether we admit with Chacornac a process of aggregation, or concretion, operating within the primal nebular mass, resulting in the production of sun and planets. In either case we come to the conclusion that our earth must at one time have been in an intensely heated gaseous condition, such as the sun now presents, self-luminous, and with a process of condensation going on at first at the surface only, until by cooling, it must have reached the point where the gaseous centre was exchanged for one of combined and liquefied matter.

Here commences the discussion of the chemistry of the earth. So long as its gaseous condition lasted,

We may suppose the whole mass to have been homogeneous; but when the temperature became so reduced that the existence of chemical compounds at the centre became possible, those which were most stable at the elevated temperature then prevailing, would be first formed. Thus, for example, while compounds of oxygen with mercury, or even with hydrogen, could not exist, oxides of silicon, aluminum, calcium, magnesium, and iron might be formed and condense in a liquid form at the centre of the globe. By progressive cooling, still other elements would be removed from the gaseous mass, which would now become the atmosphere of the non-gaseous nucleus. We may suppose an arrangement of the condensed matters at the centre according to their respective specific gravities, and thus the fact that the density of the earth as a whole is about twice the mean density of the matters which form its solid surface. Metallic or metalloidal compounds of elements grouped differently from any compounds known to us, and far more dense, may exist in the centre of the earth.

Certain elements having united to form compounds, and condensation having taken place so far as to present matter in the liquid form, a further reduction of temperature produces solidification. It is to be remembered that water forms an exception to other fluids, in that it becomes lighter in passing from the liquid to the solid form, so that its ice floats upon the surface and measurably protects the portion below from further loss of heat. Most other matters, however, are much denser in the solid than in the liquid condition, and thus, in them, the congelation commences at the centre. Having seen the central portion of the earth thus solidified under the influence of a reduced temperature, we are directed to leave the further consideration of it, because "there is no good reason for supposing that the deeply seated portions have intervened in any direct manner in the production of the rocks which form the superficial crust."

The earth's crust, to which are now to direct our attention, presented, probably, at the time of its first solidification, "an irregular diversified surface from the result of contraction of the congealing mass, which at last formed a liquid bath of no great depth, surrounding the solid nucleus."

If the crust of the earth as we now see it were subjected to intense heat, the solid land, sea and air would react upon each other, and give play to chemical affinities, just as took place when the superficial portions of the globe were actually

in a state of fusion. From this state of things would result "the conversion of all carbonates, chlorides, and sulphates into silicates; and the separation of the carbon, chlorine and sulphur in the form of acid gases, which with nitrogen, watery vapor, and a probable excess of oxygen, would form the dense primeval atmosphere." The constitution as it was, as regards the earth's surface, having been thus regained, Mr. Hunt unfolds to us the following chemical panorama:—

The atmosphere, charged with acid gases which surrounded this primitive rock, must have been of immense density. Under the pressure of such a high barometric column, condensation would take place at a temperature much above the present boiling-point of water, and the depressed portions of the half-cooled crust would be flooded with a highly heated solution of hydrochloric acid, whose action in decomposing the silicates is easily intelligible to the chemist. The formation of chlorides of the various bases, and the separation of silica, would go on until the affinities of the acid were satisfied, and there would be a separation of silica taking the form of quartz, and the production of a sea-water holding in solution, besides the chlorides of sodium, calcium and magnesium, salts of aluminium and other metallic bases. The atmosphere being thus deprived of its volatile chlorine and sulphur compounds, would approximate to that of our own time, but differ in its greater amount of carbonic acid.

We next enter into the second phase in the action of the atmosphere upon the earth's crust. This, unlike the first, which was subaqueous, or operative only on the portion covered with precipitated water, is subaërial, and consists in the decomposition of the exposed parts of the primitive crust under the influence of the carbonic acid and moisture of the air, which would convert the complex silicate of the crust into a silicate of alumina or clay, while the separated lime, magnesia and alkalies, being converted into carbonates, would be carried down into the sea in a state of solution. The first effect of these dissolved carbonates would be to precipitate the dissolved alumina and the heavy metals, after which would result a decomposition of the chloride of calcium of the sea-water, resulting in the production of carbonate of lime or limestone, and chloride of sodium or common salt. This process is one still going on at the earth's surface, slowly breaking down and destroying the hardest rocks, and, aided by mechanical processes, transforming them into clays; although the action, from the comparative rarity of carbonic acid in the atmosphere, is less energetic than in earlier times, when the abundance of this gas and a higher temperature favored the chemical decomposition of the rocks. But now, as then, every clod of clay formed from the decay of a crystalline rock corresponds to an equivalent of carbonic acid abstracted from the atmosphere, and equivalents of carbonate of lime and common salt formed from the chloride of calcium of the sea-water.

We find here an answer to the popular question, where is Neptune's laboratory, or, in other words, whence came the salts of the sea? Our author adds that, as we learn from the composition of fossil sea-waters imprisoned in the pores of the older stratified rocks, the waters of the sea in ancient times were much richer in salts of lime and magnesia than is the present ocean. Those salts of lime are now piled up in our limestones. One would here obtrude the remark that this solution of the question, making the salts of the sea to have come mainly from the gases and fluids which preceded our present atmosphere, differs from and is more comprehensive than that of those who seem to suppose that they were deposited first as rocks, and then washed down by rivers to the ocean. For example, "The case of the sea," says Fowner, "is but a magnified representative of what occurs in every lake into which rivers flow, but from which there is no outlet except by evaporation. Such a lake is invariably a salt lake. It is impossible that it can be otherwise; and it is curious to observe that this condition disappears when an artificial outlet is produced for the waters."*

* Maury—Physical Geography of the Sea.

Mr. Hunt touches upon the great changes in organic life attending the gradual removal, in the form of carbonate of lime, of the carbonic acid of the primeval atmosphere. He pictures the earlier forms of air-breathing animals, living in an atmosphere unsuited to support modern reptilian life; the agency of vegetation in decomposing the carbonic acid of the former epoch, depositing the carbon as stores of fossil fuel, and setting free the oxygen to carry on combustion in the bodies of animals; the phenomenon of plants allied to those now growing beneath the tropics, formerly flourishing within the polar circles. In relation to the last point, he says—Dr. Tyndall

Has found that the presence of a few hundredths of carbonic acid gas in the atmosphere, while offering almost no obstacle to the passage of the solar rays, would suffice to prevent almost entirely the loss by radiation of obscure heat, so that the surface of the land beneath such an atmosphere would become like a vast orchard-house, in which the conditions of climate, necessary to a luxuriant vegetation, would be extended even to the polar regions.

Our author declares that there are excellent reasons for believing granite to be, not, as has been taught, the primitive rock or substratum of the earth, but that it is of sedimentary origin; the quartz, he says, which it contains, being capable of being generated, so far as we know, only by aqueous agencies. This so-called primitive rock, therefore, he considers to be made up of materials deposited from water-like beds of sand and gravel, acted on by heat, and reduced to a condition very much like that of slag or lava. It is one form of plutonic rock.

Mr. Hunt is convinced that the theory of volcanic phenomena put forth by Sir John F. W. Herschel best accords with the known facts of chemistry and physics. This theory is that volcanoes are vents through which certain fused rocks and confined gases find their way to the surface. The fused rocks are of sedimentary origin, acted on by heat (in presence of the water which everywhere filled their pores), with a great disengagement of gases, such as carbonic and hydrochloric acids, and sulphur compounds.

In the light of the theories set forth by the lecturer, he thinks to render justice to both the opposing schools—the plutonists and the neptunists—which divided the scientific world in the last generation. "We have seen," he says, "how actions dependent on water and acid solutions have operated on the primitive plutonic mass, and how the resulting aqueous sediments, when deeply buried, come again within the domain of fire, to be transformed into crystalline and so-called plutonic or volcanic rocks."

Ovariotomy—Success of Mr. Spencer Wells's Operations.—In reporting Mr. Wells's Hospital cases of ovariotomy, the *Medical Times and Gazette* of the 4th inst. says:—

At the operation last week he stated that the total number of his cases in private and hospital practice amounted to 244. In the first 100 cases, 66 patients recovered; in the second 100, 72 recovered; and of the 44 cases since, only 6 have died. For the past eight weeks there has been an ovariotomy every Wednesday at the Samaritan Hospital, and all the patients have done, or are doing, well.

Homœopathy illustrated by its own Disciples.—The following extract from a recent homœopathic publication is too good an explanation of its *modus operandi* to be lost sight of. The italics are our own.

During the last twelve years, I think I may say that I have never been without a case of rachitis under treatment, and that I have not once failed of a perfect and complete cure. The remedies given are silicia, sulphur and calc. c. And *whichever remedy* I gave, and of *whatever potency*, the *result has been the same.* Whether I gave the 30th of silicia, or the 3d or the 6th of calc. c., or the diluted tincture of sulphur, a cure was the invariable result. Indeed, so extraordinary has been my success in these experiments, during so long a period, that *I cannot resist the suspicion that many of the cases* of incurvation of the hollow bones in rickety children *would result in spontaneous cure* if left entirely to the kindly ministrations of nature. To this, perhaps groundless suspicion, however, I would respectfully ask the attention of all medical practitioners.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 25th, 1868.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	58	47	108
Ave. mortality of corresponding weeks for ten years, 1856—1866	42.9	40.1	83.0
Average corrected to increased population - - - - -	00	00	95.7
Deaths of persons above 90 - - - - - - - -	0	0	0

PUBLISHERS' NOTICE.—The readers of the Journal will find, in the Editorial announcement and in the Advertisement on the last page, a statement of the changes to be made in the work on the commencement of a new volume. We only wish to add here, that with regard to our city subscribers, arrangements with the Boston Postmaster are likely to be made by which the Journal will be delivered in the city weekly through the post-office, on reasonable terms, and, it is believed, in a prompt and satisfactory manner. By this means the present mode of delivery by a carrier, with its attendant and often unavoidable annoyances, will be dispensed with. The small additional expense to those who do not have boxes at the post-office, it is believed will be willingly borne by subscribers in view of the superior advantages of the proposed plan. Further particulars will be given hereafter.

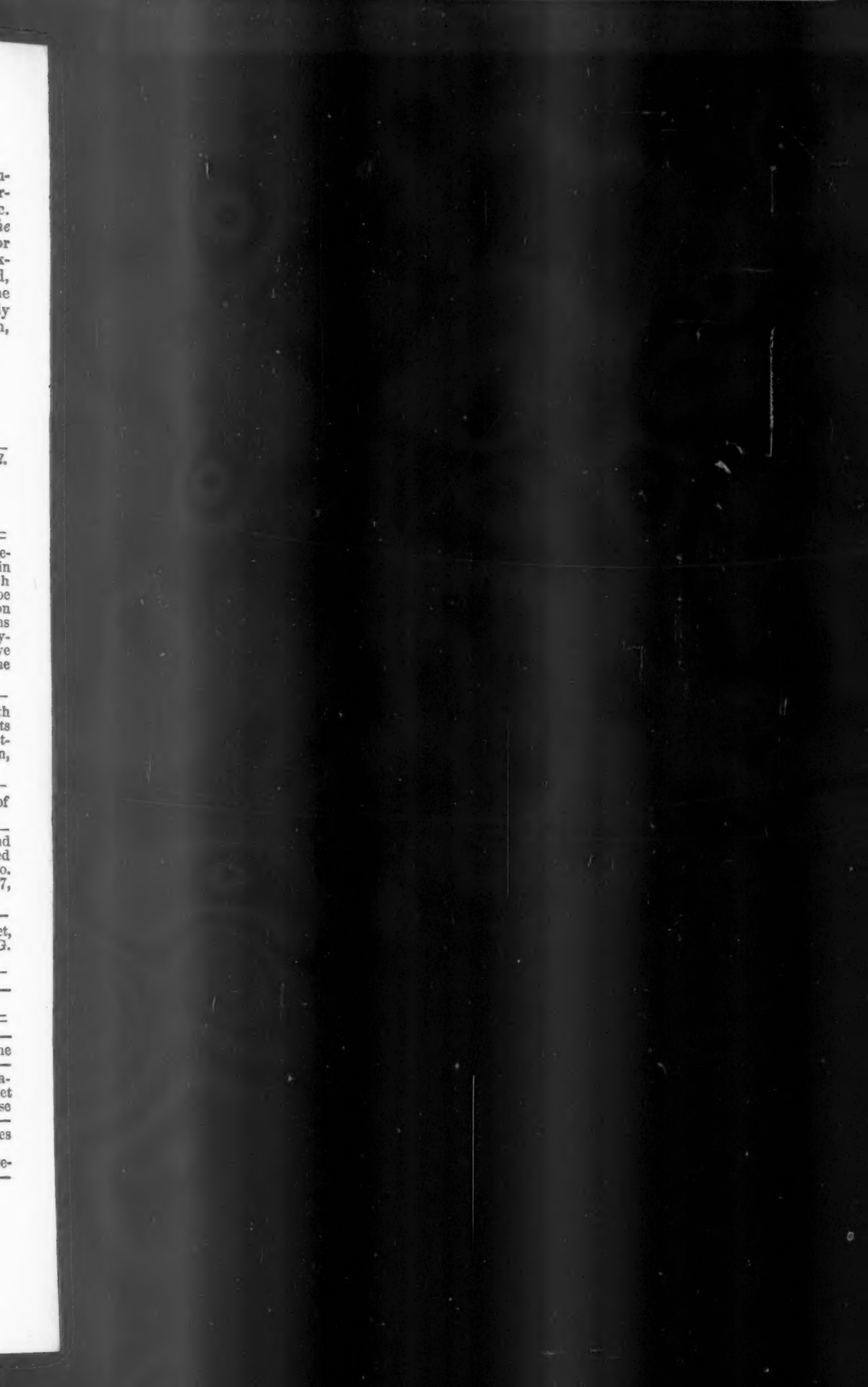
NOTICE.—Part LVI. of Braithwaite's Retrospect was mailed from this office on the 28th inst. to the members of the Massachusetts Medical Society who have paid their assessments for the year 1867-68. Members who have paid and do not find the books at their post-offices, are requested to forward their vouchers to the Librarian, care of D. Clapp & Son, Medical and Surgical Journal Office, 334 Washington St., Boston.

COMMUNICATIONS RECEIVED.—Case of Cæsarean Section.—Case of Aphasia.—Case of Laryngotomy.—On the Tactile Sense.

BOOKS AND PAMPHLETS RECEIVED.—The Treatment of Diseases of the Throat and Lungs by Inhalations, with a new Inhaling Apparatus. By Emil Siegle, M.D. Translated from the Second German Edition by S. Nickles, M.D. Cincinnati: R. W. Carroll & Co. 1868.—Address before the Philadelphia County Medical Society, delivered January 23, 1867, by Wm. Mayburry, M.D., at the close of his official term as President.

MARRIED,—In Providence, R. I., Jan. 15th, Oliver Henry Arnold, M.D., of Pawtucket, to Miss Emma Josephine Ayer, of Providence.—In Montpelier, Vt., Jan. 9th, Dr. H. G. Staples to Miss Ellen A. Dodge, both of Montpelier.

DIED,—At East Providence, R. I., Dec. 21st, Dr. Thomas W. Aspinwall, aged 49 years.—At Lowell, Jan. 23d, Dr. James G. Bradt.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 25th, 105. Males, 58—Females, 47. Abscess, 1—accident, 2—aneurism, 1—apoplexy, 3—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 2—burns, 1—cancer, 1—cholera morbus, 1—consumption, 15—convulsions, 1—croup, 1—debility, 1—diabetes, 1—diphtheria, 1—dropsy, 1—dropsy of the brain, 1—epilepsy, 2—erysipelas, 2—scarlet fever, 14—typhoid fever, 2—gastritis, 1—disease of the heart, 5—infantile disease, 5—disease of the kidneys, 1—disease of the liver, 1—inflammation of the lungs, 10—marasmus, 1—measles, 2—paralysis, 4—peritonitis, 1—premature birth, 1—scrofula, 2—suicide, 2—tabes mesenterica, 1—teething, 1—unknown, 7—whooping cough, 2.

Under 5 years of age, 46—between 5 and 20 years, 10—between 20 and 40 years, 20—between 40 and 60 years, 19—above 60 years, 10. Born in the United States, 72—Ireland, 23—other places, 10.